

Managing Landfill Odors

Presented to
LA County Solid Waste Management Committee
Integrated Waste Management Task Force

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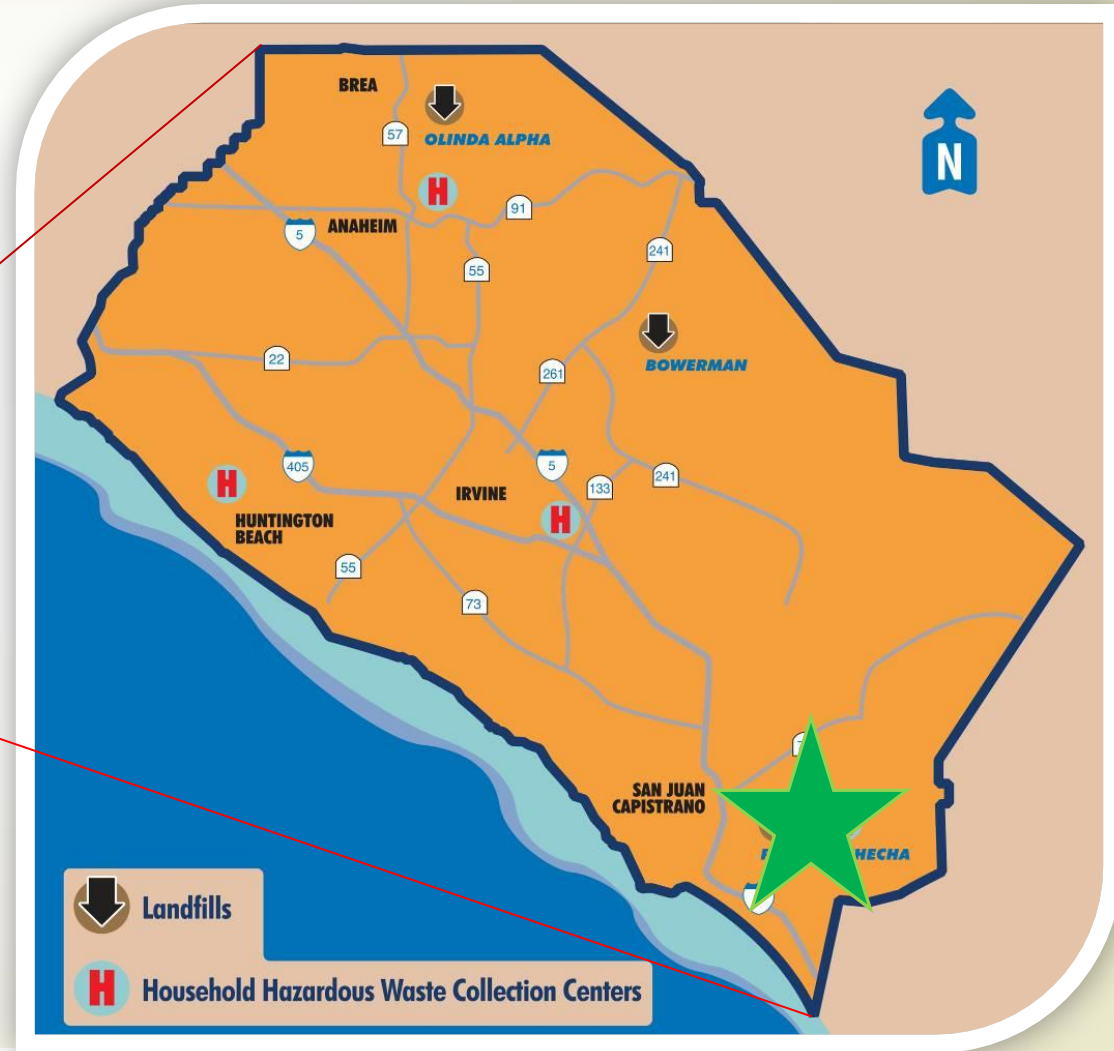


Agenda

- Project Background
- Odor Study
- Best Management Practices
- La Pata Gap Closure Project
- Lessons Learned



Orange County Waste Management System





Prima Deshecha Facts and Figures

- Class III MSW Landfill
- Property: 1,530 acres
- Daily Tonnage: 1,400 tpd
- Open: 1976
- WMU: Zone 1 (Current) and 4 (Future)
- Facilities: MRF, HHWCC, Power Plant, Regional Trails, and Biological Restoration







Odor Complaints

- New Housing Development
- Started in Spring 2013
 - 109 Odor Complaints from May – April 2014
 - Complaints Noon to 5 pm





OC Waste & Recycling Approach

➤ Ignore It

Or

➤ Address the Community Concerns

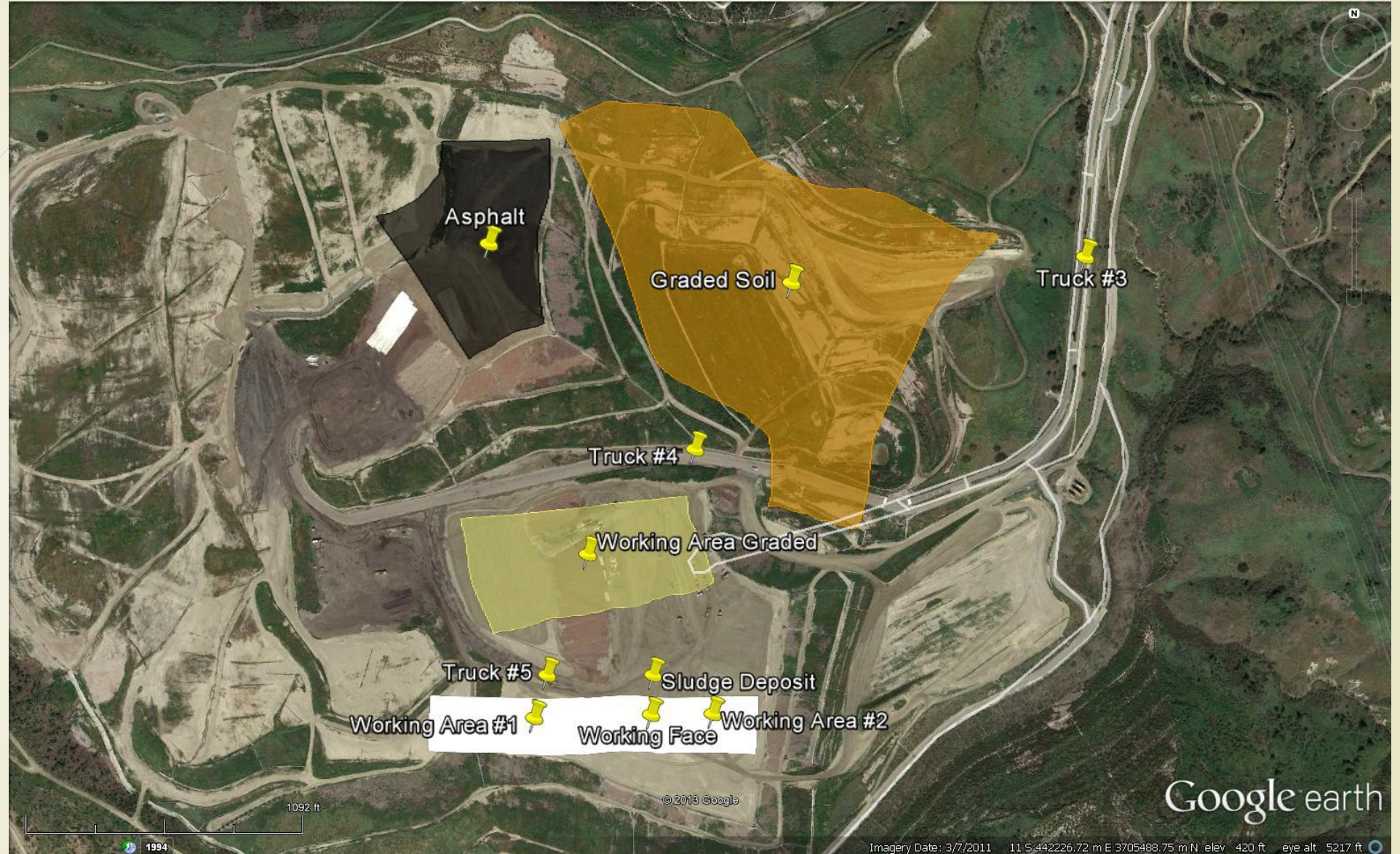




OC Waste & Recycling Approach

- Scientific Approach to Identify the Source of the Odors
- Understand Local Meteorological Conditions and Dispersion Modeling
- Develop Operational Best Management Practices
- Develop Engineering Controls
- Outreach with Developer and Homeowners

Odor Study – Source Characterization

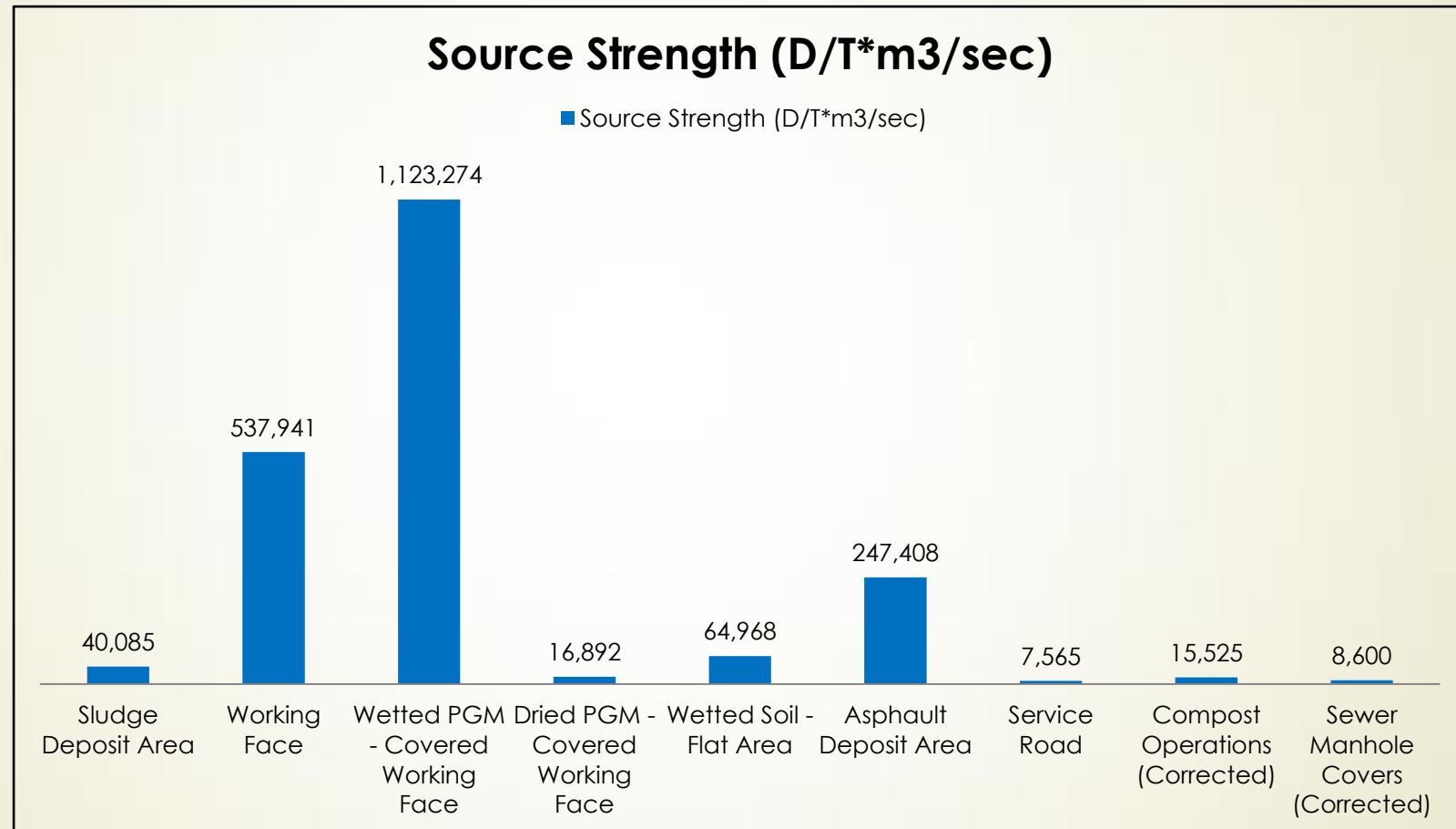


Odor Study – Source Characterization



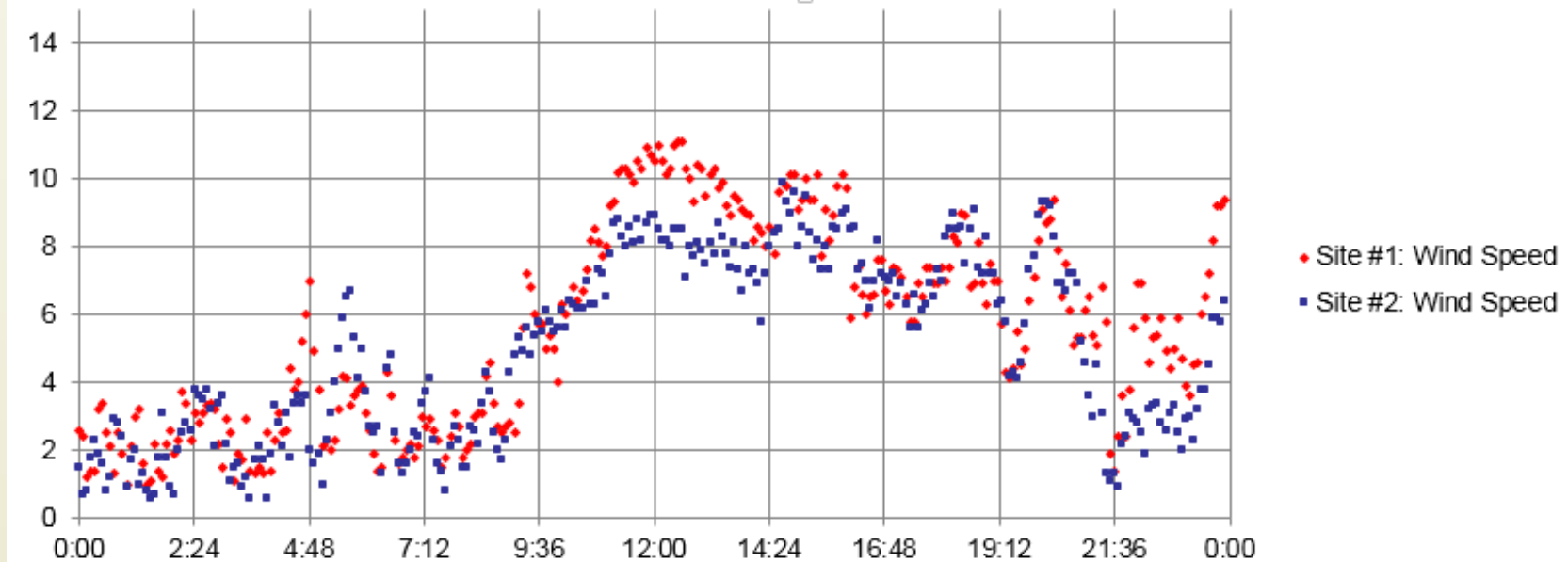
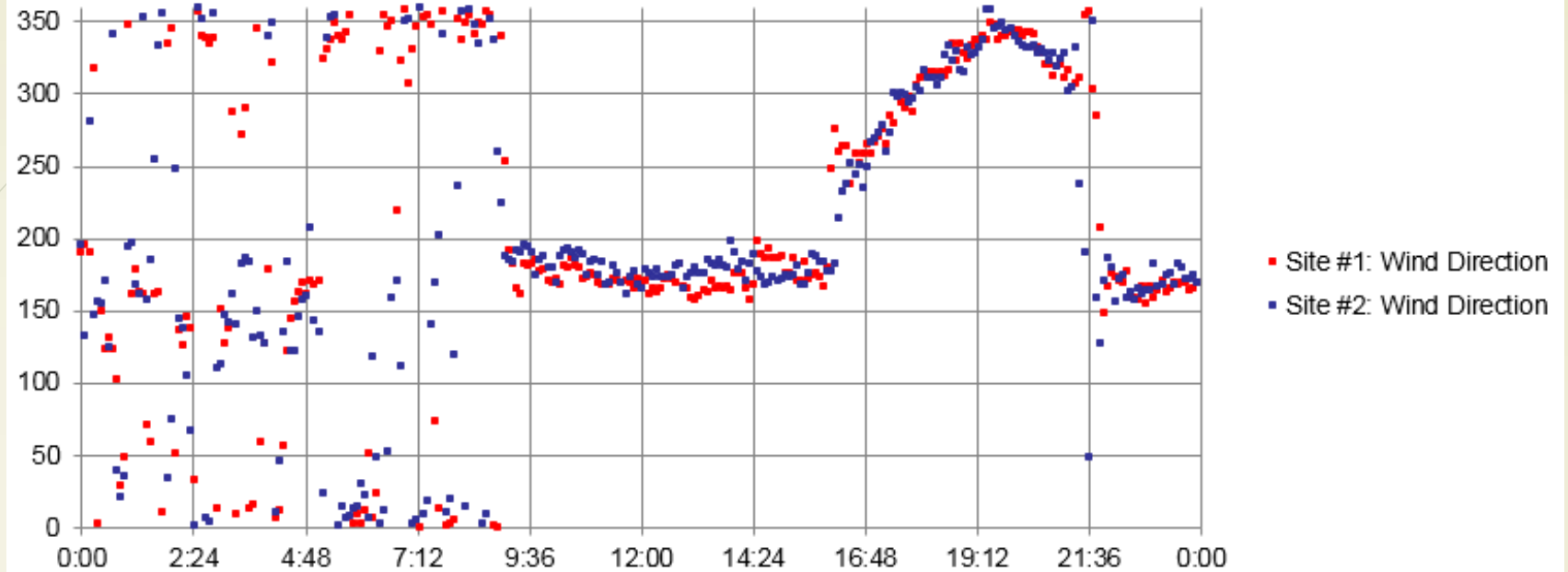


Results: Odor Source Strength Profile





Typical Wind Trajectories



Wind Trajectories





Operational Best Management Practices

- Working Face
 - Keep to Minimal Size
 - Bury Trash ASAP
 - Change Locations
- Biosolids Management
 - Mix with Trash/Dirt/PGM
 - Accept Before 2 pm
 - No Weekend Deliveries
 - Work with WWTP to neutralize loads





Operational Best Management Practices

- Processed Green Waste
 - Reduce 14 to 6 Loads Per Day (58% Reduction)
 - Bury or Use as ADC Before 11 am
 - Intermediate Slope Application Winter Months



Engineering Controls

- Maximize Landfill Gas Collection
- Constructed Berm, Planted Trees
- Installed Misting System at Property Boundary
- Place Misting Systems at the Tipping Floor
- Constructed Wind Deflection Fences



Viewshed Berm - Before

VALINDA DEVELOPMENT

Looking towards Valinda from Landfill

Note: View from landfill prior to the installation of a view and sound barrier

Landfill Gas Line



Viewshed Berm - After



Ridgeline Misting Systems



Portable Misting System



Wind Deflection Fences with Misters





Community Outreach

- Town Hall Meeting with Developer and Homeowners
- Acknowledge Concerns
- Provided Contact to Address Complaints
- Promised to Manage Odors BUT Never Eliminate Odors
- Frequent Communication with Developer and Homeowners

La Pata Gap Closure Project





Project Background

- 2.3 Mile 4-Lane Arterial Highway (Phase A)
- Alternative to I-5 Freeway Connecting the Cities of San Juan Capistrano and San Clemente
- Involves Excavation and Reconsolidation of 700,000 cy of MSW from WMU-2 to Zone 1
- Partial Final Closure of WMU-2
- Project Duration (Phase A): April 2014 – Summer 2016
- Waste Excavation: May 2014 – December 2014



La Pata Gap Closure Project

**700,000
CY MSW**



ZONE 4



Best Management Practices

- Excavation Site
 - Minimize Exposed Excavation Site (e.g., <2000 sf)
 - Continuous OVA Monitoring
 - Onsite MET Station
 - Daily Covering
- Transport
 - Cover Loads with Dirt
 - Litter Control



Best Management Practices

- Reconsolidation Site
 - Wind Deflection Fences
 - Misting Systems (Ridgeline, Wind Fences, and Portable Units)
 - Relocated Landfill Operations
 - Dirt
 - Maximize Production = Reduce Schedule

La Pata Gap Closure - Excavation





La Pata Gap Closure - Excavation





La Pata Gap Closure - Excavation





La Pata Gap Closure - Excavation



La Pata Gap Closure - Reconsolidation



La Pata Gap Closure - Reconsolidation





Conclusions

- Before Odor Management
 - 109 Odor Complaints from May 2013 – April 2014
- After Odor Management
 - 52 Odor Complaints from May 2014 – April 2015
 - 12 - Landfill Operations
 - 40 - Waste Excavation (May – December)



THANK YOU

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